

CLAIMS

We claim:

1. A method comprising:
5 traversing a schedule with a bus master, the schedule having a plurality of elements,
each element having information pertaining to one of a plurality of endpoints;
 executing transactions on a bus in accordance with the information pertaining to the
plurality of endpoints;
 counting flow control events issued by individual endpoints; and
10 skipping elements in the traversal of the schedule, the elements being skipped
corresponding to endpoints which have issued a threshold number of flow control events.
2. The method of Claim 1 further comprising:
 stopping traversal of the schedule by the bus master;
15 resetting a flow control event counter for at least one endpoint to an initial value; and
restarting traversal of the schedule by the bus master.
3. The method of Claim 1 further comprising:
 marking an element as a head of the schedule;
20 stopping traversal of the schedule by the bus master if, after marking an element as
the head, the bus master completely traverses the schedule without executing any
transactions; and
 restarting traversal of the schedule by the bus master.
4. The method of Claim 3 further comprising:
25 resetting a flow control event counter for at least one endpoint to an initial value.
5. The method of Claim 1 further comprising:
 stopping traversal of the schedule by the bus master after all endpoints have issued
30 the threshold number of flow control events; and
 restarting traversal of the schedule by the bus master.
6. The method of Claim 5 further comprising:
 resetting a flow control event counter for at least one endpoint to an initial value.
7. The method of Claim 5 wherein traversal of the schedule by the bus master is
35 restarted after an adjustable amount of time.

8. The method of Claim 5 wherein traversal of the schedule by the bus master is restarted after a fixed amount of time.

9. The method of Claim 8 wherein the fixed amount of time is ten microseconds.

10. A machine-readable medium that provides instructions, which when executed by a machine, cause the machine to perform operations comprising:

traversing a schedule with a bus master, the schedule having a plurality of elements, each element having information pertaining to one of a plurality of endpoints;

executing transactions on a bus in accordance with the information pertaining to the plurality of endpoints;

counting flow control events issued by individual endpoints; and
skipping elements in the traversal of the schedule, the elements being skipped corresponding to endpoints which have issued a threshold number of flow control events.

11. The machine-readable medium of Claim 10 which causes the machine to perform further operations comprising:

stopping traversal of the schedule by the bus master;

resetting a flow control event counter for at least one endpoint to an initial value; and

restarting traversal of the schedule by the bus master.

12. The machine-readable medium of Claim 10 which causes the machine to perform further operations comprising:

marking an element as a head of the schedule;

stopping traversal of the schedule by the bus master if, after marking an element as the head, the bus master completely traverses the schedule without executing any transactions; and

restarting traversal of the schedule by the bus master.

13. The machine-readable medium of Claim 12 which causes the machine to perform further operations comprising:

resetting a flow control event counter for at least one endpoint to an initial value.

14. The machine-readable medium of Claim 10 which causes the machine to perform further operations comprising:

stopping traversal of the schedule by the bus master after all endpoints have issued the threshold number of flow control events; and

restarting traversal of the schedule by the bus master.

15. The machine-readable medium of Claim 14 which causes the machine to perform a further operation comprising:
resetting a flow control event counter for at least one endpoint to an initial value.

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16. The machine-readable medium of Claim 14 wherein traversal of the schedule by the bus master is restarted after an adjustable amount of time.

10 17. The machine-readable medium of Claim 14 wherein traversal of the schedule by the bus master is restarted after a fixed amount of time.

18. The machine-readable medium of Claim 17 wherein the fixed amount of time is ten microseconds.

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19. An apparatus comprising:
a bus master to control transactions on a bus;
a schedule to contain information about a plurality of endpoints, the endpoints to be coupled to the bus; and
a counter to count flow control events issued by at least one of the plurality of endpoints, such that the bus master suspends service to an endpoint which has issued a threshold number of flow control events.

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20. The apparatus of Claim 19 wherein the counter counts in a linear fashion.

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21. The apparatus of Claim 19 wherein the counter counts in a circular fashion.

22. The apparatus of Claim 19 wherein the schedule includes a circular linked list of elements, each element to contain information about a particular endpoint.

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23. The apparatus of Claim 19 wherein the schedule includes an array of elements, each element to contain information about a particular endpoint.

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24. A system comprising:
a processor;
memory coupled to the processor;
a bus coupled to the processor and to the memory;
a bus master to control transactions on the bus;
at least one endpoint coupled to the bus;

a schedule to contain information about the at least one endpoint coupled to the bus;
and

a counter to count flow control events issued by the at least one endpoint, such that
the bus master suspends service to an endpoint which has issued a threshold number of
flow control events.

25. The apparatus of Claim 24 wherein the counter counts in a linear fashion.

26. The apparatus of Claim 24 wherein the counter counts in a circular fashion.

27. The apparatus of Claim 24 wherein the schedule includes a circular linked list of
elements, each element to contain information about a particular endpoint.

28. The apparatus of Claim 24 wherein the schedule includes an array of elements,
each element to contain information about a particular endpoint.